Journal of CRYSTALLOGRAPHIC and SPECTROSCOPIC RESEARCH

Volume 22, Number 6 **December 1992**

CONTENTS

Cyclodipeptides: Structure and conformation of cyclo(tyrosyl—prolyl) 643
P. J. Milne, D. W. Oliver, and H. M. Roos

Crystal structure of bis-[dihydrido(3,5-dimethyl-1-pyrazolyl)(3,5-diphenyl-1-pyrazolyl)pyrazolyl)borate]zinc(II), [Zn{H_2B(3,5-Me_2Pz)(3,5-Ph_2Pz)}$_2$] 651
Mario V. Capparelli and Giuseppe Agrifoglio

Crystal structure of salograviolide A, a guaiane-type sesquiterpene lactone 659
Urszula Rychlewska, Beata Szczepańska, Włodzimierz M. Daniewski, and Gerard Nowak

Synthesis and structural evidence for new diimidazo[1,5-a:1′,5′-d]pyrazinediones 665
Krzysztof Burak, Zdzislaw Machoń, and Tadeusz Glowiak

Crystal and molecular structure of 1-phenyl-3-(2-hydroxyphenylamino)-2-buten-1-one, $C_{16}H_{15}NO_2$ 673
Tadeusz Głowiak and Jarosław M. Sobczak

Resolution enhancement of electronic spectra. Performance of some Fourier domain filters 679
Mark A. Snoswell and Tomas Kurucsev

Crystal structure of triphenylphosphine oxide 687
Khalid A. Al-Farhan

X-ray structural investigation of 1,3,6,8-tetramethyl-10-(4-*m*.xilenyl-2,6-pyridyl diketone) anthracene 691
Gabriele Bocelli, Andrea Cantoni, Franca Bigi, and Giovanni Sartori

Structure of 2-(2′-bromo-5′-nitrostyryl)benzothiazole 695
James A. Muir, Osvaldo Cox, Luis A. Bernard, and Mariel M. Muir

Crystal and molecular structures of *trans*-bis(acetonitrile)bis(bipyridine)ruthenium(II) perchlorate and *trans*-diamminebis(bipyridine)ruthenium(II) perchlorate 699
A. W. Cordes, B. Durham, W. T. Pennington, B. Kuntz, and L. Allen

Structural properties of some heteroaryl amines. Crystallographic studies on 2-N-(2,4,6-trinitrophenyl)-pyridineamine(I), -4-methylthiazoleamine(II), and -pyrimidineamine(III) 705
Luciano Forlani, Luigi P. Battaglia, Anna Bonamartini Corradi, and Paolo Sgarabotto

Transition metal(II) complexes of a biological buffer. Structural and spectroscopic study on Co(II), Ni(II), Cu(II), Zn(II), and Cd(II) complexes of N-[2-hydroxy-1,1-bis-(hydroxymethyl)ethyl]glycine 713
Ledi Menabue and Monica Saladini

Crystal structure of phenyl bis(O-isopropylxanthato s,s′)arsenic(III) 721
R. Karra, Y. P. Singh, R. Bohra, and A. K. Rai

Crystal and molecular structure of an anchored catechol ligand: 2,3-dihydroxy benzenemethanimine α-(2-hydroxymethyl)phenyl 725
V. G. Puranik, S. S. Tavale, A. S. Kumbhar, R. G. Yerande, S. B. Padhye, and R. J. Butcher

Crystal and molecular structure of 2,2-diphenyl-5-dichloromethylene-3-oxazoline-4-ethylcarboxylate 733
V. G. Puranik and S. S. Tavale

Complexation between tungsten(VI) and citrate: The crystal and molecular structure of a dinuclear complex, $Na_6[W_2O_5(cit)_2]\cdot 10H_2O$ 737
Johannes J. Cruywagen, Louis J. Saayman, and Margaret L. Niven

Synthesis, spectroscopic characterization of thiosemicarbazone complexes of nickel(II) and X-ray structures of anisaldehyde thiosemicarbazone (ATSZH) and bis(tolualdehyde thiosemicarbazonato)nickel(II) 741
N. T. Akinchan, R. Akinchan, U. J. Ibok, L. P. Battaglia, A. Bonamartini Corradi, and P. Drożdżewski

NOTE

Structure of (chloranilato)bis(tri-n-butylphosphine)palladium(II) 755
R. F. Johnston, D. G. VanDerVeer, and R. A. Holwerda

ERRATUM 761

FUTURE CONTRIBUTIONS TO *JOURNAL OF CRYSTALLOGRAPHIC AND SPECTROSCOPIC RESEARCH* 763

AUTHOR INDEX TO VOLUME 22 765

INSTRUCTIONS TO CONTRIBUTORS 775

Journal of CRYSTALLOGRAPHIC and SPECTROSCOPIC RESEARCH

Volume 22, Number 5 **October 1992**

CONTENTS

Structure analyses of methone- and isomenthone-tosylhydrazones, $C_{17}H_{26}N_2O_2S$ 515
D. F. Mullica, C. M. Garner, M. E. Prince, B. C. Mossman, and E. L. Sappenfield

Platinum(II) dibromo,bis (3,5-diamino-1(2)-triazolium) dibromide: Synthesis, crystal and molecular structure, and infrared characterization 523
Antonio C. Fabretti

Synthesis, thermal, spectroscopic, and X-ray studies of (dichloroacetato)(triphenylphosphine)gold(I) 527
J. Skoweranda, W. Wieczorek, M. Bukowska-Strzyżewska, A. Grodzicki, and E. Szłyk

Two acetylamino derivatives of 2,4-bis(trichloromethyl)-1,3-benzdioxin showing different types of hydrogen bonding: (a) $(Cl_3C)CH\cdots O{=}C$ and (b) $N{-}H\cdots O{=}C$ 533
Anne Irving

Crystal and molecular structure of 3-tert-butyl-l-ethyl-l-[(4-chlorobenzene) sulfonyl] urea 541
M. Datta, B. Mazumdar, A. K. Das, S. K. Mazumdar, and G. Bocelli

Molecular structure of 3α-ethoxy-8α-acetoxy-13-hydroxy-lactar-6(7)en-5-oic acid γ-lactone 547
P. Gluziński, J. W. Krajewski, W. M. Daniewski, M. Gumułka, and K. Ptaszyńska

Crystal and molecular structure of 4-*p*-hydroxyphenyl-2,2,4-trimethylthiachroman-1,1-dioxide 551
C. S. Frampton, D. D. MacNicol, P. R. Mallinson, and J. D. White

Crystal and molecular structures of (±)cadinene dihydrochloride (1) and (−)cadinene dihydrochloride (2) 557
Michał W. Wieczorek, Danuta Kalemba, and Józef Góra

Ground state structure of molecules "prepared" for phototautomerization: 2,2′-bipyridyl-3,3′-diol and 2,2′-bipyridyl-3-ol 563
J. Lipkowski, A. Grabowska, J. Waluk, G. Calestani, and B. A. Hess, Jr.

Quaternary salts of oxo-sparteines: Crystal structure of N(16)-methyl-2-oxo-α-isosparteine iodide monohydrate 573
Anna E. Koziol and Urszula Majchrzak-Kuczyńska

X-ray crystal structure analysis of nitroxazepine: 10-(3-dimethylaminopropyl)-2-nitro-10,11-dihydrodibenz [b,f][1,4]oxazepin-11-one 579
O. Johnson, D. W. Jones, K. Nagarajan, M. M. Bhadbhade, and K. Venkatesan

NMR studies and X-ray crystallography of galdosol 5-methyl ether from *Salvia officinalis* L. 585
Z. Djarmati, R. M. Jankov, J. Csanadi, A. Djordjevic, B. Ribar, D. Lazar, and P. Engel

Crystal and molecular structures of 1-(2-carboxypropan-2-ylamino)-3-(1-naphthyloxy) propan-2-ol (1) ($C_{17}H_{21}NO_4$) and 1-(2-carbamoyl propan-2-ylamino)-3-(1-napthyloxy) propan-2-ol (2) ($C_{17}H_{22}N_2O_3$) 591
G. D. Bujacz, M. W. Wieczorek, and E. Galas

Structural study of bonding in halogeno ruthenium complexes: Application to ruthenium nitrosyls 601
Redouane Zarhloul, René Faure, and Jean-Pierre Deloume

Molecular and crystal structure of 2-amino-4-(tricyclo[3.3.1.1.3,7]decyl-1)-6-N-methyl-piperazino-1,3,5-triazine 607
S. J. Hamodrakas, A. Hempel, N. Camerman, F. P. Ottensmeyer, P. Tsitsa, E. Antoniadou-Vyzas, and A. Camerman

NOTES

Crystal structure of dicyclohexylammonium *N,N*-dimethyldithiocarbamylacetate hydrate, $[(\text{cyclo-}C_6H_{11})_2NH_2][(CH_3)_2NCS_2CH_2CO_2]\cdot H_2O$ 615
Seik Weng Ng

Crystal and molecular structure of a dihomooxacalix[4]arene-metaxylene (1 : 1) clathrate 619
M. Perrin and S. Lecocq

Crystal and molecular structure of rac.(3aR,8bS,5′R)-3-[[(2,5-dihydro-3-methyl-2-oxo-5-furanyl)oxo]methylene]-3,3a,4,8b-tetrahydroindeno[1,2-b]furan-2-one, $C_{17}H_{14}O_5$ 625
W. P. Bosman, J. M. M. Smits, Paul T. Beurskens, E. M. Mangnus, F. J. Dommerholt, R. L. P. de Jong, and B. Zwanenburg

Structure of sodium(1,10-phenanthroline)-(2-nitrobenzoate)sesquihydrate 629
M. S. Hundal, Geeta Sood, Parveen Kapoor, N. S. Poonia, and Edward R. T. Tiekink

Crystal and molecular structure of ethyl-anti-10-acetoxy-syn-10-methyl-endotricyclo[5.2.1.$0^{2,6}$]deca-3,8-dien-8-carboxylate, $C_{17}H_{22}O_4$ 633
J. H. M. Lange, A. J. H. Klunder, H. Behm, F. G. Moers, and Paul T. Beurskens

FUTURE CONTRIBUTIONS TO *JOURNAL OF CRYSTALLOGRAPHIC AND SPECTROSCOPIC RESEARCH* 639

INSTRUCTIONS TO CONTRIBUTORS 641

Journal of CRYSTALLOGRAPHIC and SPECTROSCOPIC RESEARCH

Volume 22, Number 4 **August 1992**

CONTENTS

Crystal structure of β-C.I. Solvent Yellow 18, 4(2′-4′-dimethyl phenyl hydrazono)-5-methyl-2-phenyl-3H-pyrazol-3-one 385
A. Whitaker

Synthesis and structure of μ-oxo-bis[(acetylacetonato)(thioacetylacetonato)]dioxodimolybdenum(V) and μ-oxo-[tris(acetylacetonato)(thioacetylacetonato)]dioxodimolybdenum(V) 391
Boris Kamenar, Branka Korpar-Čolig, Maja Penavić, and Marina Cindrić

Low-temperature redetermination of the structures of three gold compounds 397
Peter G. Jones and Eberhard Bembenek

Phenylmercury(II) dithiophosphates. Crystal structure of (O,O′-diethyldithiophosphate) phenylmercury(II) 403
E. M. Vázquez-López, A. Castiñeiras, A. Sánchez, J. S. Casas, and J. Sordo

Crystal structures and properties of catena-μ-nitrato (7-amino-5-aza-4-methyl-3-hepten-2-onato) copper(II) and μ_3-hydroxo-tris(μ-8-amino-5-aza-4-methyl-3-octen-2-onato) tricopper(II) dinitrate 411
Edmund Kwiatkowski, Marek Kwiatkowski, Urszula Dettlaff-Weglikowska, and Douglas M. Ho

Crystal structure of a pentanuclear gold-silver cluster complex 421
Mazhar-Ul-Haque, William Horne, and Omar M. Abu-Salah

Crystal and molecular structure of tetramethylammonium picrate 427
Luciano Antolini, Andrea Marchetti, Carlo Preti, and Mara Tagliazucchi

Synthesis, crystal structure and spectral studies of the complex $[Ni(C_3H_4N_2)_4(H_2O)_2]\cdot(C_6H_4COSO_2N)_2$ 433
Yugeng Zhang, Jianmin Li, Wenbin Lin, Shixiong Liu, and Jinling Huang

Crystal structure of a nucleoside analog: 1-(R)-[6-(R)-hydroxymethyl-1,4-dioxan-2-yl] uracil 439
A. K. Das, M. Datta, S. K. Mazumdar, N. Das, A. Van Aerschot, J. N. Low, and R. Alan Howie

Molecular associations of hydrazones. X. Dihydrazones as twin-site donors 443
Elisabetta Giorgini, Giorgio Tosi, and Gabriele Bocelli

Crystal structure of N(1)-methyl-α-isosparteine iodide and 1,16-endomethylene-α-isosparteine diiodide 449
Anna E. Koziol

Crystal and molecular structure of gochnatolide, a sesquiterpene lactone 461
Rubén A. Toscano, Emme Maldonado, and Alfredo Ortega

Structure, bonding, and magnetic behavior of bis(μ-chloro)- and (μ-bromo)-bridged Cu(II) dimers 467
M. T. Garland, J.-Y. Saillard, E. Spodine

Crystal and molecular structure of delsoline 477
Balawant S. Joshi, Haridutt K. Desai, S. William Pelletier, and M. Gary Newton

Relationship of the crystal structure of γ-N,N-dimethylaminopropyl 2,2-diphenylpropionate hydrochloride to antimuscarinic activity 485
Jean M. Karle, Isabella L. Karle, Haim Leader, Eli Breuer, Amy H. Newman, Richard K. Gordon, and Peter K. Chiang

Structural studies of two tetracyclines: 4-dedimethylaminotetracycline hydrate and 6-methylene-5-oxytetracycline hydrochloride 493
A. E. Koziol, J. Davis, R. C. Palenik, and G. J. Palenik

NOTES

Crystal and molecular structure of (3aR,6aR,5′R)3-[[(2,5-dihydro-3-methyl-2-oxo-5-furanyl)oxo]methylene]-3,3a,6,6a-tetrahydro-2H-cyclopenta[b]furan-2-on, $C_{13}H_{12}O_5$ 503
W. P. Bosman, J. M. M. Smits, Paul T. Beurskens, E. M. Mangnus, and B. Zwanenburg

Crystal structure of dicyclohexylammonium *catena*-(2-sulfobenzoato-*O*,*O*′)triphenylstannate(IV) 507
Seik Weng Ng and V. G. Kumar Das

FUTURE CONTRIBUTIONS TO *JOURNAL OF CRYSTALLOGRAPHIC AND SPECTROSCOPIC RESEARCH* 511

INSTRUCTIONS TO CONTRIBUTORS 513

10 785HI XL 1676
11/94 31249-125

Journal of CRYSTALLOGRAPHIC and SPECTROSCOPIC RESEARCH

Volume 22, Number 3 **June 1992**

CONTENTS

Structures of threo(*RR*,*SS*) diethyl ester of 2-hydroxy-1,2-diphenylethylphosphonic acid and (±)diethyl ester of (1-hydroxycyclopentyl)(2-methylphenyl)methylphosphonic acid 253
O. Angelova, J. Macicek, N. G. Vassilev, S. Momchilova, and J. Petrova

Synthesis, spectroscopy, and structures of 2-bromo-1-bromoimino-3-oxo-isoindoline(III) and 1-bromoimino-3-oxoisoindoline(IV) 259
P. A. Greenwood, M. F. C. Ladd, and D. C. Povey

Crystal structure of [$PrCl_3$(15-crown-5)] prepared via electrocrystallization 265
Luis Nuñez and Robin D. Rogers

Crystal and molecular structure of 2-(2′-chloro-5′-nitrostyryl)benzoselenazole 271
Mariel M. Muir, Osvaldo Cox, Luis Bernard, and James A. Muir

Synthesis and structural characterization of bismuth complexes with sulphur-containing ligands: The crystal and molecular structures of two derivatives of $BiBr_3$ and $Bi_2(SO_4)_3$ with imidazolidine-2-thione 275
L. P. Battaglia, A. Bonamartini Corradi, and G. Pelosi

Crystal structure of M(II) bis-μ-diacetoamidopropionate, diaqua·$4H_2O$ (M = Cu, Zn, Co): An uncommon carbonyl-*O*-of-peptide-coordinated two-dimensional layered polymer 281
Eduardo Zárate M, J. Gómez-Lara, Rubén A. Toscano, G. Negrón, and A. Campero

A structural study of sodium dithionite and its ephemeral dihydrate: A new conformation for the dithionite ion 291
Jeffrey B. Weinrach, Dale R. Meyer, Joseph T. Guy, Paul E. Michalski, Kay L. Carter, Desiree S. Grubisha, and Dennis W. Bennett

Spectroscopic and crystal structure analysis of methyl 1-phenyl-3,4-dioxo-2-napthalenecarboxylate, $C_{18}H_{12}O_4$ 303
D. F. Mullica, J. S. Belew, S. K. Hunt, and E. L. Sappenfield

Crystal and molecular structures of 1-(2-methyloxycarbonylo-propan-2-ylamino)-3-(1-naphthyloxy) propan-2-ol hydrochloride (1) ($C_{18}H_{24}NO_4Cl$) and 1-(2-methylcarbamoyl propan-2-ylamino)-3-(1-naphthyloxy) propan-2-ol (2) ($C_{18}H_{24}N_2O_3$) 309
G. D. Bujacz, M. W. Wieczorek, and E. Galas

Preparation and X-ray structure of $[(\text{methyl quinaldate})_2H]^+[AuBr_4]^-$ 317
Mohamed A. S. Goher, Afaf K. Hafez, Wai-Hing Yip, and Thomas C. W. Mak

Crystal structure and spectroscopic study of 2-[(2,6-dichlorophenyl)amino]phenylacetoxyacetic acid (Aceclofenac) 323
A. Alvarez-Larena, J. F. Piniella, E. Carrasco, A. Ginebreda, S. Julia, and G. Germain

Crystal and molecular structure of two isomeric N-methyl iodides of thiobinupharidine: *trans*,*trans*-N,N′-dimethyl-thiobinupharidine diiodide dihydrate acetone solvate and *cis*,*trans*-N,N′-dimethylthiobinupharidine diiodide dihydrate methanol solvate 329
Anna E. Koziol, Jacek Cybulski, Krystyna Wojtasiewicz, and Jerzy T. Wróbel

The X-ray crystal structures of bis(L-α-alaninehydroxamato)nickel(II) and bis(L-α-alaninehydroxamato)copper(II) 341
Tadeusz Glowiak and Barbara Kurzak

Synthesis and structure of (H_2O·HBF_4)$_2$(18-crown-6) 349
Jerry L. Atwood, Abbas Alvanipour, and Hongming Zhang

Unusual solid-state conformation of D-glucitol hexa(p-chlorobenzoate) 353
Urszula Rychlewska, Jacek Gawroński, Krystyna Gawrońska

NOTES

Crystal structure of [$CeCl(OH_2)_3$(EG4)]Cl_2·H_2O (EG4 = Tetraglyme) 361
Robin D. Rogers and Rodger F. Henry

Synthesis and crystal structure of [$UO_2(NO_3)_2(OH_2)_2$]·2(benzo-15-crown-5) 365
Robin D. Rogers, Andrew H. Bond, and William G. Hipple

Crystal structure of triphenyltin(IV) isonicotinate 371
Seik Weng Ng and V. G. Kumar Das

Crystal and molecular structure of 16,18-di-*O*-acetyl-16,18-didemethyldelphinine 375
Haridutt K. Desai, Balawant S. Joshi, S. William Pelletier, and M. Gary Newton

FUTURE CONTRIBUTIONS TO *JOURNAL OF CRYSTALLOGRAPHIC AND SPECTROSCOPIC RESEARCH* 381

INSTRUCTIONS TO CONTRIBUTORS 383

Journal of CRYSTALLOGRAPHIC and SPECTROSCOPIC RESEARCH

Volume 22, Number 2 **April 1992**

CONTENTS

^{1}H NMR spectral analysis of physalin A, a 13,14-seco-16,24-cyclosteroid, based on crystal structure of (25*R*) - 2,3,25,27-tetrahydrophysalin A dimethanol solvate 131
Masao Kawai, Tooru Taga, Yoshihisa Miwa, and Yasuo Butsugan

Molecular structure and spectra of bis (1,4-dimethylpyridinium)-tetrachlorocuprate(II) 139
Suraj P. Narula, Sukhjeevan Kaur, Surinder K. Sharma, and David C. Povey

Molecular structure and spectroscopic characterization of tetrakis (2,5-diamino-1,3,4-thiadiazolium) decabromodibismuthate(III) 145
Adriano Benedetti, Antonio C. Fabretti, and Wanda Malavasi

Crystal and molecular structure of C.I. Solvent Yellow 2, 1-phenylazo-4 (N,N-dimethylamine)-phenyl 151
A. Whitaker

Synthesis, crystal and molecular structure of *N*-(*p*-chlorobenzylamide) of α-(1,1-ethylenedioxy)-ethyl-γ-hydroxybutyric acid 157
W. Wieczorek and B. Malawska

Crystal and molecular structure of 2-cyano-2-phenyl-sparteinium perchlorate 163
Irena Wolska, Teresa Borowiak, and Władysław Boczoń

Molecular and crystal structure of 6-methylsparteine diperchlorate 169
Andrzej Katrusiak and Jerzy Skolik

X-ray crystallographic characterization of 10,11-dihydro-5H-dibenz[b,f]azepine-5-carboxamide 177
G. Bandoli, M. Nicolini, A. Ongaro, G. Volpe, and A. Rubello

Crystal structure of a seven-coordinate cobalt(II) complex with a new polyfunctional hydrazonic ligand, $[Co(H_4dapis)(OH_2)_2]Cl_2 \cdot 9/2H_2O$ 185
Daniele Belletti, Mauro Carcelli, Corrado Pelizzi, and Giancarlo Pelizzi

Molecular complexes of sulfonamides. 2. 1:1 complexes between drug molecules: sulfadimidine-acetylsalicylic acid and sulfadimidine-4-aminosalicylic acid 193
Mino R. Caira

Crystal structure of the 1:1 complex formed by 4-nitropyridine N-oxide and 4-nitrophenol 201
R. Moreno Fuquen, R. H. de Almeida Santos, and J. R. Lechat

Structure and molecular chirality of the acetonitrile adduct of the 2:1 salt of quinidine with biphenyl 5,5′-dinitro-2,2′-dicarboxylic acid (5,5′-dinitrodiphenic acid) 205
Maciej Kubicki, Teresa Borowiak, and Marian Gawron

X-ray structural and molecular mechanics investigation of cyclopentadienyl-carbonyl-triphenylophosphine-phenylacetyl-iron, $(\eta^5\text{-}C_5H_5)Fe(CO)(PPh_3)(COCH_2C_6H_5)$ 213
J. W. Krajewski, P. Gluziński, A. Zamojski, A. Mishnyov, A. Kemme, and Zhong-Wu Guo

Crystal and molecular structure of 7α,8α,13-trihydroxy-marasman-5-oic acid γ-lactone, $C_{15}H_{22}O_4$ 219
P. Gluziński, J. W. Krajewski, W. M. Daniewski, M. Gumułka, and P. Skibicki

Polymeric structure of succinatobis(benzimidazole)copper(II) monohydrate 225
A. Tosik and M. Bukowska-Strzyżewska

X-ray structures of tris(*O*-cyclohexyldithiocarbonato)bismuth(III) and tris(*O*-benzyldithiocarbonato)bismuth(III) 231
Edward R. T. Tiekink

NOTE

Crystal structure of copper(II) mellitate, β-type, $[Cu_4\{C_6(COO)_5(COOH)\}_2(H_2O)_{12}Cu(H_2O)_4] \cdot 6H_2O$ 237
Hatsue Tamura and Kazuhide Ogawa

FUTURE CONTRIBUTIONS TO *JOURNAL OF CRYSTALLOGRAPHIC AND SPECTROSCOPIC RESEARCH* 249

INSTRUCTIONS TO CONTRIBUTORS 251

Journal of CRYSTALLOGRAPHIC and SPECTROSCOPIC RESEARCH

Volume 22, Number 6 **December 1992**

CONTENTS

Cyclodipeptides: Structure and conformation of cyclo(tyrosyl—prolyl) 643
P. J. Milne, D. W. Oliver, and H. M. Roos

Crystal structure of bis-[dihydrido(3,5-dimethyl-1-pyrazolyl)(3,5-diphenyl-1-pyrazolyl)borate]zinc(II), [Zn{H_2B(3,5-Me_2Pz)(3,5-Ph_2Pz)}$_2$] 651
Mario V. Capparelli and Giuseppe Agrifoglio

Crystal structure of salograviolide A, a guaiane-type sesquiterpene lactone 659
Urszula Rychlewska, Beata Szczepańska, Włodzimierz M. Daniewski, and Gerard Nowak

Synthesis and structural evidence for new diimidazo[1,5-a:1′,5′-d]pyrazinediones 665
Krzysztof Burak, Zdzisław Machoń, and Tadeusz Głowiak

Crystal and molecular structure of 1-phenyl-3-(2-hydroxyphenylamino)-2-buten-1-one, $C_{16}H_{15}NO_2$ 673
Tadeusz Głowiak and Jarosław M. Sobczak

Resolution enhancement of electronic spectra. Performance of some Fourier domain filters 679
Mark A. Snoswell and Tomas Kurucsev

Crystal structure of triphenylphosphine oxide 687
Khalid A. Al-Farhan

X-ray structural investigation of 1,3,6,8-tetramethyl-10-(4-*m*.xilenyl-2,6-pyridyl diketone) anthracene 691
Gabriele Bocelli, Andrea Cantoni, Franca Bigi, and Giovanni Sartori

Structure of 2-(2′-bromo-5′-nitrostyryl)benzothiazole 695
James A. Muir, Osvaldo Cox, Luis A. Bernard, and Mariel M. Muir

Crystal and molecular structures of *trans*-bis(acetonitrile)bis(bipyridine)ruthenium(II) perchlorate and *trans*-diamminebis(bipyridine)ruthenium(II) perchlorate 699
A. W. Cordes, B. Durham, W. T. Pennington, B. Kuntz, and L. Allen

Structural properties of some heteroaryl amines. Crystallographic studies on 2-N-(2,4,6-trinitrophenyl)-pyridineamine(I), -4-methylthiazoleamine(II), and -pyrimidineamine(III) 705
Luciano Forlani, Luigi P. Battaglia, Anna Bonamartini Corradi, and Paolo Sgarabotto

Transition metal(II) complexes of a biological buffer. Structural and spectroscopic study on Co(II), Ni(II), Cu(II), Zn(II), and Cd(II) complexes of N-[2-hydroxy-1,1-bis-(hydroxymethyl)ethyl]glycine 713
Ledi Menabue and Monica Saladini

Crystal structure of phenyl bis(O-isopropylxanthato s,s′)arsenic(III) 721
R. Karra, Y. P. Singh, R. Bohra, and A. K. Rai

Crystal and molecular structure of an anchored catechol ligand: 2,3-dihydroxy benzenemethanimine α-(2-hydroxymethyl)phenyl 725
V. G. Puranik, S. S. Tavale, A. S. Kumbhar, R. G. Yerande, S. B. Padhye, and R. J. Butcher

Crystal and molecular structure of 2,2-diphenyl-5-dichloromethylene-3-oxazoline-4-ethylcarboxylate 733
V. G. Puranik and S. S. Tavale

Complexation between tungsten(VI) and citrate: The crystal and molecular structure of a dinuclear complex, $Na_6[W_2O_5(cit)_2]\cdot 10H_2O$ 737
Johannes J. Cruywagen, Louis J. Saayman, and Margaret L. Niven

Synthesis, spectroscopic characterization of thiosemicarbazone complexes of nickel(II) and X-ray structures of anisaldehyde thiosemicarbazone (ATSZH) and bis(tolualdehyde thiosemicarbazonato)nickel(II) 741
N. T. Akinchan, R. Akinchan, U. J. Ibok, L. P. Battaglia, A. Bonamartini Corradi, and P. Drożdżewski

NOTE

Structure of (chloranilato)bis(tri-n-butylphosphine)palladium(II) 755
R. F. Johnston, D. G. VanDerVeer, and R. A. Holwerda

ERRATUM 761

FUTURE CONTRIBUTIONS TO *JOURNAL OF CRYSTALLOGRAPHIC AND SPECTROSCOPIC RESEARCH* 763

AUTHOR INDEX TO VOLUME 22 765

INSTRUCTIONS TO CONTRIBUTORS 775